12-15-04

AR/2124
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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/653,247
Filing Date	08/31/2000
First Named Inventor	Alcorn
Art Unit	2124
Examiner Name	Vu
Attorney Docket Number	AUS920000464US1

Total Number of Pages in This Submission

ENCLOSURES (Check all that apply)

- [✓] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment/Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Reply to Missing Parts/ Incomplete Application
  - [ ] Reply to Missing Parts under 37 CFR 1.52 or 1.53

- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) _____
  - [ ] Landscape Table on CD

Remarks

- [ ] After Allowance Communication to TC
- [ ] Appeal Communication to Board of Appeals and Interferences
- [✓] Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- [ ] Proprietary Information
- [ ] Status Letter
- [ ] Other Enclosure(s) (please Identify below):

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Siegesmund & Associates
Signature	*Rudolf O. Siegesmund*
Printed name	Rudolf O. Siegesmund
Date	December 14, 2004
Reg. No.	37,720

CERTIFICATE OF TRANSMISSION/MAILING

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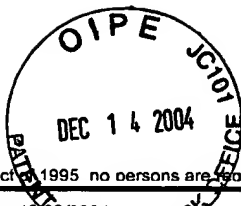
Signature	*Rudolf O. Siegesmund*		
Typed or printed name	Rudolf O. Siegesmund	Date	December 14, 2004

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FEE TRANSMITTAL
For FY 2005

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	($) *500.00*

Complete if Known

Application Number	09/653,247
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METHOD OF PAYMENT (check all that apply)

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☒ Deposit Account   Deposit Account Number: 09-0447   Deposit Account Name: IBM, Corp.

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES Fee ($)	FILING FEES Small Entity Fee ($)	SEARCH FEES Fee ($)	SEARCH FEES Small Entity Fee ($)	EXAMINATION FEES Fee ($)	EXAMINATION FEES Small Entity Fee ($)	Fees Paid ($)
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)	Multiple Dependent Claims	
_____ - 20 or HP = _____ x _____ = _____				Fee ($)	Fee Paid ($)
HP = highest number of total claims paid for, if greater than 20					

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____ - 3 or HP = _____ x _____ = _____			
HP = highest number of independent claims paid for, if greater than 3			

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
_____ - 100 = _____	/ 50 = _____	(round up to a whole number) x _____	= _____	

4. OTHER FEE(S)

Fees Paid ($)

Non-English Specification, $130 fee (no small entity discount)   _____

Other: Appeal Brief $500.00

SUBMITTED BY

Signature	Rudolf O. Siegesmund	Registration No. (Attorney/Agent) 37,720	Telephone 214-528-2407
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OIPE
DEC 14 2004

Application No.: 09/653,247
Applicant: Alcorn
Filing Date: 08/31/2000
Group Art Unit: 2124
Title: Object Oriented Structured Query Language (OOSQL) Support for
Enterprise Java Beans

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

BRIEF IN SUPPORT OF APPEAL FROM THE PRIMARY EXAMINER TO THE

BOARD OF PATENT APPEALS & INTERFERENCES

Dear Sir:

The Applicant submits the following brief, in triplicate, to support the appeal to the Board

of Patent Appeals and Interferences of the Examiner's rejection of the Applicant's claims in the

pending application identified above.

12/16/2004 AWONDAF1 00000032 090447 09653247
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I. REAL PARTY IN INTEREST

The real party in interest in the present application is International Business Machines Corporation, a New York corporation having a place of business in Armonk, New York.

II. RELATED APPEALS & INTERFERENCES

The Applicant has no knowledge of any appeal or interference proceedings that are relevant to the present application.

III. STATUS OF CLAIMS

The Applicant has cancelled claims 1-11, 13, 16-17, and 22-23. The Examiner has rejected pending claims 12, 14-15, 18, 21, and 24-35. The Applicant appeals the Examiner's rejection of all pending claims.

IV. STATUS OF AMENDMENTS

The Applicant submitted a response, dated September 20, 2004, to the Examiner's final office communication, in which the Applicant amended the specification to correct a typographical error. The Applicant has received no further communication from the Examiner and is unaware of the status of this amendment.

V. SUMMARY OF INVENTION

The present invention includes a method of building Enterprise Java Bean (EJB) objects, *see* U.S. Patent App. No. 09/653,247 17-19 (filed Aug. 31, 2000), from the results of an object-oriented database query, *see id.* at 10-11, 14-15 (discussing object-oriented queries that use EJB

attributes). Existing technology allows an application server to evaluate the object-oriented query and return certain types of objects (such as CORBA objects) that satisfy the query. *Id.* at 7. The Applicant's invention uses the existing technology to obtain CORBA objects, and then converts them to corresponding EJB objects. *Id.* at 7-8.

VI. ISSUES

The Examiner rejected the Applicant's claims as being obvious in view of two prior art references.

1. To establish prima facie obviousness of a claimed invention, though, all the claim limitations must be taught or suggested by the prior art. The Examiner concedes that neither of the prior art references relied upon teaches all of the Applicant's claim limitations. Has the Examiner adequately established that these prior art references, in combination, teach or suggest the Applicant's claimed invention as a whole?

2. There must be some motivation, suggestion or teaching of the desirability of making a specific combination of prior art references, even if such a combination, in fact, does teach or suggest all claim limitations. If the Examiner has established that Codella and Bowman, in combination, teach or suggest all of the Applicant's claim limitations, has the Examiner identified any motivation, suggestion, or teaching to combine these references to produce the Applicant's claimed invention as a whole?

VII. GROUPING OF CLAIMS

For purposes of this appeal, all pending claims stand or fall together. In the event, however, that new references are cited or new arguments advanced for rejection of the claims, the Applicant reserves the right to argue that such claims do not stand or fall together.

VIII. ARGUMENT

The Examiner rejected all claims per 35 U.S.C. § 103(a), as being obvious in view of C. F. Codella et al., *Support for Enterprise JavaBeans in Component Broker*, 37 IBM Systems Journal 4, 502-538 (1998) and U.S. Pat. No. 6,529,948 (issued March 4, 2003) [hereinafter Bowman].

To establish prima facie obviousness of a claimed invention, though, all the claim limitations must be taught or suggested by the prior art. *See* United States Patent & Trademark Office, *Manual of Patent Examining Procedure* (8th ed. rev. 2 2004) § 2143.03 [hereinafter *MPEP*] (citing *In re Royka*, 490 F.2d 981 (CCPA 1974)). But most, if not all, inventions arise from a combination of old elements. *In re Kotzab*, 217 F.3d 1365, 1369 (Fed. Cir. 2000) (citing *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998)). "Thus, every element of a claimed invention may often be found in the prior art" and the Examiner must consider the claimed invention as a whole. *Id.* at 1369-70; *accord MPEP* §2141.02. "[I]dentification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention." *Kotzab*, 217 F.3d at 1370. "Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination . . . ." *Id.*; *accord MPEP* § 2143.01.

As discussed in detail below, neither Codella nor Bowman, in combination or alone, teaches or suggests the claimed invention as a whole. Moreover, even if Codella and Bowman collectively did teach or suggest each individual claim limitation, neither provides any teaching, suggestion, or motivation to modify the prior art to produce the claimed invention as a whole. Thus, the Examiner has not established a prima facie case of obviousness, and the Applicant respectfully requests the Board to reverse the Examiner's rejections.

A. The Prior Art References

The Applicant provides the following summary of the prior art in order to convey the Applicant's current understanding of the reference upon which the Examiner relies.

1. Codella

Codella discusses various component models, which define frameworks for multi-platform, multi-language distributed object interaction. In particular, Codella discusses the Object Management Group's Common Object Request Broker Architecture (CORBA), IBM's Component Broker,[1] and SUN's Enterprise JavaBeans (EJB).

An "object," as that term is used in Codella, encapsulates program code and data, and provides an interface through which a program or other objects within the program can access the data. Codella, *supra*, at 502. In general, an object only "exists" within a single program. *Id.* at 503. But a component model, such as CORBA or Component Broker, provides services that an object can use to communicate and exchange data with any other object that conforms to the

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[1] Component Broker is IBM's proprietary CORBA implementation, Codella, *supra*, at 502, and is now part of IBM's Websphere Application Server, Enterprise Edition (WAS/EE), *see, e.g.*, IBM Redbooks, IBM WebSphere Application Server Enterprise Edition Component Broker 3.0: First Steps, at http://publib-b.boulder.ibm.com/Redbooks.nsf/RedbookAbstracts/sg242033.html?Open. (last visited 08/06/2004).

component model – even if the other objects exist in another program or an another machine in a network. *Id.*

Codella teaches that Component Broker includes the Managed Object Framework (MOFW), which represents a set of interfaces and conventions that "must be followed in order to create and use business objects in Component Broker." *Id.* at 505. Codella's thesis, though, is that "Component Broker is an ideal platform on which to implement the EJB architecture specification." *Id.* at 514. *See also id.* at 504 (". . . Component Broker is an example of a CORBA [Object Transaction Monitor] that can be used to deploy EJB components by implementing the contract between a component and its container"). According to Codella, "the main concepts in the EJB specification, namely, Enterprise beans, containers, factories, finders, handles, and so on, correspond in a natural way to concepts in Component Broker such as business objects, homes, instance managers, and son on." *Id.* at 514. Thus, as illustrated in FIG. 8, MOFW adds a layer of "usability and function" to CORBA services, *see id.* at 505, and provides a foundation for implementing an EJB container, *id.* at 514. As Codella further points out, an entity bean "must[2] implement a number of application-specific create and find methods." *Id.* at 521. Container tools (i.e. Component Broker tools) generate an entity bean's finder methods. *Id.*

2. Bowman

Bowman discusses, among many other things, a method for processing a query for an object stored in a database, so that related objects are returned along with the requested object "in one access operation." Bowman, *supra*, at 2:17-26.

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[2] Presumably, the entity beans "must" implement certain methods to comply with the EJB specification.

B. The Prior Art Does Not Teach or Suggest All the Limitations of the Claimed Invention

The Examiner states that Codella discloses "a method of building Enterprise Java Bean objects that meet an object-oriented query." (Office Communication from Examiner to Applicant of 7/21/2004, at 4 (discussing independent claim 12) [hereinafter O.A.].) In particular, the Examiner states that Codella, in FIG. 1 and on page 505, discloses the step of "executing an object-oriented query on an application server such that the server returns data objects in response to the query." (*Id.*) The Applicant, though, is unable to identify any subject matter in either FIG. 1 or page 505 that describes the act of executing a query on an application server, much less an object-oriented query. Rather, FIG. 1 merely illustrates "a framework for running server-side components," Codella, *supra*, at 504, while page 505 only discusses a specific implementation of this framework, *id.* at 505.

Thus, while Codella teaches many things about implementing an EJB container, including finder methods, Codella does not teach all of the limitations of the Applicant's claims that the Examiner has suggested it teaches. In particular, Codella does not disclose the act of executing an object-oriented query within an EJB container.

C. The Prior Art Does Not Suggest the Desirability of the Claimed Invention

1. The Examiner Did Not Consider the Claimed Invention as a Whole

The Examiner concedes that Codella does not disclose many other elements in Applicant's claimed invention, as well, including the use of a JAVA Vector as a container for data objects, and the conversion of the JAVA Vector to a JAVA Enumeration (*see* O.A., at 4, 5, & 9 (discussing independent claims 12, 27, and 31)), but suggests that Bowman discloses these elements. In particular, the Examiner states that Bowman, "in a method to communicate Corba

[sic] environment [sic] with enterprise beans in order to provide object-oriented distribution, discloses [a] server beans implementation of business data and Java Vector in conjunction with [an] Enumeration analogous to the EJB interface by Codella." (O.A., at 5 (citing Bowman, *supra*, at 203:48 to 204:40).)

The cited reference, though, is nothing more than a cursory review of methods for "managing constants in a computer program" (Bowman, *supra*, at 202:33-34), albeit in an "object-based system" (*id.* at 203:15) using a JAVA Vector (*id.* at 204:4) and an Enumeration object (id. at 204:23-35). Again, the Applicant is unable to identify any other subject matter in the cited material that relates to the Applicant's claimed invention as a whole. Particularly within the cited excerpt, the concept of object-oriented queries appears foreign to Bowman, there is no reference to CORBA, as the Examiner has suggested, and the only reference to "enterprise beans" merely indicates that the "example has not yet been updated to JavaBeans" (*id.* at 203:66-67). Thus, the Examiner appears not to have considered the claimed invention as a whole, and nothing in the cited prior art either motivates, suggests, or teaches "the desirability of making the specific combination" that the Applicant claims. *See Kotzab*, 217 F.3d at 1370; *accord MPEP* § 2144.03.

2. The Examiner has not provided substantial evidence of "well-known" concepts

Without considering the claimed invention as a whole, the Examiner nonetheless suggests that modifying Codella in view of Bowman would be obvious because of a "well known concept in [the] Java programming language." (O.A., at 5 (discussing claim 12).) Such a conclusion, though, is only permissible "where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-

known." *MPEP* § 2144.03 (citing *In re Ahlert*, 424 F.2d 1088, 1091 (CCPA 1970)). An Examiner may not rely on "well-known" prior art without citing a reference "where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known." *MPEP* § 2144.03. Specific knowledge of the prior art *always* must be supported by substantial evidence, *id.* (citing the Administrative Procedure Act; *In re Gartside*, 203 F.3d 1305, 1315 (Fed. Cir. 2000); *MPEP* § 1216.01, which must include citation to some reference work "*recognized as a standard* in the pertinent art," particularly in areas of "esoteric technology," *MPEP* § 2144.03 (emphasis added). "It is *never* appropriate to rely solely on 'common knowledge' in the art without evidentiary support in the record." *Id.* (emphasis added) (citing *In re Zurko*, 258 F.3d 1379, 1385 (Fed. Cir. 2001). The Examiner has not cited any standard reference, nor provided any other evidence that demonstrate any concepts are "well-known." Thus, the Examiner's conclusion is inappropriate here, and so is the rejection, which the Examiner has made final.[3]

3. The Examiner's reasoning is neither clear nor unmistakable

Moreover, the Examiner "*must* provide specific factual findings predicated on sound technical and scientific reasoning to support his or her conclusion of common knowledge." *Id.* (emphasis added) (citing *In re Soli*, 317 F.2d 941, 946 (CCPA 1963); *In re Chevenard*, 139 F.2d 711, 713 (CCPA 1943); *see also Kotzab*, 217 F.3d at 1370 (mandating that the Board of Patent Appeals provide "particular findings" and stating that "[b]road conclusory statements standing alone are not 'evidence'"). The Examiner's underlying technical reasoning of the conclusion based on the "well-known concept," though, is neither "clear" nor "unmistakable." *See id.* The

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[3] Reliance on common knowledge or "well-known" prior art "should be rare when an application is under final rejection . . . ." *MPEP* § 2144.03.

Examiner appears to suggest that the "well-known concept" is either "add[ing] to the creation of EJB objects . . . a Java Vector to contain the objects," using a "Vector to operate with the Enumeration," or "data type safety protection and less type checking burden" (O.A., at 5), but it is unclear if the Examiner is referring to these concepts collectively or individually. If the Examiner is referring to an individual concept, it is not clear to which individual concept the Examiner is referring. It is clear, though, that the Examiner has not provided "particular findings," *see Kotzab*, 217 F.3d at 1370 that provide any motivation, teaching, or suggestion that it is desirable to combine JAVA Vectors, Enumerations, and object-oriented queries in an application server to build Enterprise Java Bean objects, as the Applicant has done.

IX. CONCLUSION

The Applicant has specifically pointed out the errors in the Examiner's action and is entitled to documentary evidence or an affidavit that supports the Examiner's reliance on "well-known" concepts. *See MPEP* § 2144.03 C. Without such evidence, the Examiner has neither cited prior art that discloses the Applicant's invention as a whole, nor adequately identified any motivation, suggestion, or teaching of the desirability of the specific combination that the Applicant claims. Thus, the Examiner has failed to establish prima facie obviousness of the Applicant's claimed invention. Therefore, allowance of the present application is in order, and the Applicant respectfully requests the Board to reverse the Examiner's rejections.

Respectfully submitted,

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Express Mail Label No. _ER 392172 926 US_ Date of Deposit: _12/14/04_
I hereby certify that this paper and fee are being deposited with the United States Postal Service Express Mail Post Office to Addressee service under 37 CFR 1.10 on the date indicated above and is addressed to the Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313.

Rudolf O. Siegesmund
Rudolf O. Siegesmund

X. APPENDIX OF CLAIMS

12.   A method of building Enterprise Java Bean objects that meet conditions of an object-oriented query comprising the steps of:

executing an object-oriented query on an application server such that the application server returns data objects responsive to the query;

adding each data object returned by the application server to a JAVA Vector object;

converting the JAVA Vector object to a JAVA Enumeration; and

narrowing the JAVA Enumeration to Enterprise Java Bean objects having attributes that meet the conditions of the object-oriented query.

14.   The method of claim 12 wherein the application server comprises a Managed Object Framework for processing the object-oriented query.

15.   The method of claim 14 wherein the execution step comprises calling the evaluate( ) method of an IQueryableIterableHome object in the Managed Object Framework.

18.   The method of claim 12 wherein the converting step comprises calling a method of the JAVA Vector object that creates the JAVA Enumeration.

21.   The method of claim 12 wherein the narrowing step comprises calling a PortableRemoteObject.narrow( ) method in order to avoid application server specific code.

24.   The method of claim 14 wherein the execution step comprises calling the extendedEvaluate() method of an IQueryableIterableHome object in the Managed Object Framework.

25.   The method of claim 12 wherein the application server is a CORBA application server.

26.   The method of claim 25 wherein the data objects are CORBA data objects.

27.   A programmable apparatus for building Enterprise Java Bean objects that meet conditions of an object-oriented query, the programmable apparatus comprising:

a processor;

a memory;

an application server program in the memory;

means for directing the application server to evaluate the object-oriented query and return data objects responsive to the query;

means for directing the processor to add each data object returned by the application server to a JAVA Vector object;

means for directing the processor to convert the JAVA Vector object to a JAVA Enumeration; and

means for directing the processor to narrow the JAVA Enumeration to Enterprise Java Bean objects having attributes that meet the conditions of the object-oriented query.

28.   The programmable apparatus of claim 27 wherein the application server

comprises a Managed Object Framework for evaluating the object-oriented query.

29.   The programmable apparatus of claim 27 wherein the application server is a

CORBA application server.

30.   The programmable apparatus of claim 29 wherein the data objects are CORBA

data objects.

31.   A computer-readable memory for causing a computer to build Enterprise Java

Bean objects that meet conditions of an object-oriented query, the computer-readable memory

comprising:

a computer-readable storage medium; and

a program stored in the storage medium that causes the computer to

evaluate the object-oriented query and return data objects responsive to the query,

add each data object returned by the application server to a JAVA Vector object,

convert the JAVA Vector object to a JAVA Enumeration, and

narrow the JAVA Enumeration to Enterprise Java Bean objects having attributes that

meet the conditions of the object-oriented query.

32.   The computer-readable memory of claim 31 further comprising an application

server program in the storage medium for evaluating the object-oriented query.

33.   The computer-readable memory of claim 32 wherein the application server

comprises a Managed Object Framework for evaluating the object-oriented query.

34.   The computer-readable memory of claim 32 wherein the application server is a

CORBA application server.

35.   The computer-readable memory of claim 34 wherein the data objects are CORBA

objects.